

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and the listing of claims in the application:

Listing of Claims

1. (Currently Amended) An electronic system comprising

a system to be monitored having a plurality of output signals,

a plurality of fault-monitoring devices systems each of which is adapted to have a respective input from the system to be monitored and an output for outputting output a fault signal when an input a respective input indicates that the electronic system to be monitored is in a fault condition associated with the fault monitoring system, wherein:

the fault-monitoring devices systems are arranged in a cascade fashion and the electronic system is adapted to cause the first fault monitoring device of the cascade to detect a fault and to output a fault signal such that a fault signal output from one fault-monitoring device system is provided as an input to a subsequent fault-monitoring device system in the cascade of fault-monitoring devices systems to simulate a fault condition associated with the subsequent fault-monitoring device system, and

the output of a final fault-monitoring device in the cascade is used as an indicator of a fault in one of the fault-monitoring devices.

2. (Cancelled)

3. **(Previously Presented)** An electronic system according to claim 1, the electronic system further being arranged to:

place the electronic system into a first fault condition and monitor for a generation of a first fault signal from a first fault-monitoring device,

on the generation of a first fault signal from the fault-monitoring device after placing the electronic system into a first fault condition, to input the first fault signal to the second fault-monitoring device, and

in response to an output from a final fault-monitoring device to store a record to this effect in non-volatile memory.

4. **(Previously Presented)** An electronic system according to claim 3 wherein, on subsequent reversion of the electronic system to a non-fault condition, the electronic system is arranged to check whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on a subsequent reversion, generate an alarm signal.

5. **(Currently Amended)** An electronic system according to claim 1 wherein a first fault-monitoring device system is adapted to output a fault signal when the electronic system is placed into a switched-off condition.

6. **(Currently Amended)** An electronic system according to claim 5 wherein the first fault-monitoring device system is a watch-dog system.

7. (Original) An electronic system according to claim 5 wherein the electronic system is associated with a vehicle and the electronic system is placed into a switched-off condition by turning an ignition key.

8. (Currently Amended) An electronic system according to claim 5 wherein a second fault-monitoring device system has as an input the fault signal from the first fault-monitoring device system, the second fault-monitoring system being adapted to output a fault signal when the electronic system experiences an under- or over-voltage condition.

9. (Currently Amended) An electronic system according to claim 1 further comprising storing a record of a fault signal output by any of the fault-monitoring devices systems to enable identification of a defective fault-monitoring device system.

10. (Currently Amended) A self-test method for an electronic system comprising
a system to be monitored having a plurality of output signals,
a plurality of fault-monitoring devices systems each of which is adapted to have a
respective input from the system to be monitored and an output for outputting output a fault
signal when an input a respective input indicates that the electronic system to be monitored is in
a fault condition associated with the fault-monitoring system, the fault-monitoring devices
systems being arranged in a cascade fashion and the electronic system is adapted to cause the

first fault monitoring device of the cascade to detect a fault and to output a fault signal such that a fault signal output from one fault-monitoring device system is provided as an input to a subsequent fault-monitoring device system in the cascade of fault-monitoring devices systems,
the method comprising:

inputting the fault signal from one fault-monitoring device system to a subsequent fault-monitoring device system to simulate a fault condition associated with the subsequent fault-monitoring device system, wherein

the output of a final fault-monitoring device in the cascade is used as an indicator of a fault in one of the fault-monitoring devices.

11. (Cancelled)

12. (Previously Presented) A self-test method according to claim 10, further comprising:

placing the electronic system into a first fault condition and monitoring for a generation of a first fault signal from a first fault-monitoring device,
on the generation of a first fault signal from the fault-monitoring device after placing the electronic system into a first fault condition, inputting the first fault signal to the second fault-monitoring device, and

in response to an output from a final fault-monitoring device storing a record to this effect in non-volatile memory.

13. **(Previously Presented)** A self-test method according to claim 12 further comprising, on subsequent reversion of the electronic system to a non-fault condition, checking whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on subsequent reversion, generating an alarm signal.

14. **(Currently Amended)** A self-test method according to claim 10 further comprising outputting a fault signal from the first fault-monitoring device system when the electronic system is placed into a switched-off condition.

15. **(Currently Amended)** A self-test method according to claim 14 wherein the first fault-monitoring device system is a watch-dog system.

16. **(Previously Presented)** A self-test method according to claim 14 wherein the electronic system is associated with a vehicle and the electronic system is placed into a switched-off condition by turning an ignition key.

17. **(Currently Amended)** An electronic system according to claim 14 wherein a second fault-monitoring device system has as an input the fault signal from the first fault-monitoring device system, the second fault-monitoring system being adapted to output a fault signal when the electronic system experiences an under- or over-voltage condition.

18. **(Currently Amended)** A self-test method according to claim 10 further comprising storing a record of a fault signal output by any of the fault-monitoring devices systems to enable identification of a defective fault-monitoring device system.

19 – 31. **(Cancelled)**

32. **(New)** An electronic system according to claim 1 further arranged to create a record of a fault from the output of the final fault-monitoring system, the absence of a record being created signifying a fault in a fault-monitoring device system.